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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,837	11/26/2003	Yulun Wang	022001-000902US	9225
7590 05/17/2005			EXAMINER	
FRANK NGUYEN INTUITIVE SURGICAL, INC. 950 KIFER ROAD SUNNYVALE, CA 94086			FARAH, AHMED M	
			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8

# Office Action Summary

Application No.

10/722,837

Applicant(s)

WANG ET AL.

Examiner

Ahmed M Farah

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1,2,4-6,10-15,19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,10-15,19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/5/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 5, 8, 10, 12, 19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Brant et al. U.S. Patent No. 6,278,975 B1.

Brant et al. disclose a voice command and control medical care system comprising: an input device, speech interface, switching interface, output channels, and plurality of surgical devices (see Figs. 2-4).

As to claims 1 and 5, Brant et al. disclose an interface device (control circuitry within main console **38**) for coupling an input device (input switches **72**) to a first surgical apparatus (vitrectomy cutter **32**) and a second surgical apparatus (fragmentation handpiece **34**), the device comprising:

an interface that has a first input channel coupled to the input device (unidentified bus connected to input switches **72**), a first output channel coupled to the first surgical apparatus (aspiration line **50** connected to vitrectomy cutter **32**), a second output channel coupled to the second surgical apparatus (electrical line **46** connected to

Art Unit: 3739

fragmentation handpiece **34**), and a select channel (function select switches **60**, **62**, **64**, etc.) that switches the first input channel between the first output channel and the second output channel; and

a speech interface (microphone **26**, computer **18**, etc.) which receives commands from a surgeon and provides command signals to the select channel (column 6, lines 8-57).

The function of input switches **72** changes depending upon which function select switch is selected, e.g., function of switches **72** is different for vitrectomy mode (function select switch **60**), fragmentation mode (function select switch **62**), scissor mode (function select switch **64**), etc. (see column 5, lines 27-38, and column 8, lines 40-49);

As to claim 5, the speech interface (microphone **26**, computer **18**, etc.) provides a control signal to the first and second surgical apparatus (via function select switches **60**, **62**, **64**, etc.), and the first input channel (unidentified bus connected to input switches **72**) is coupled to the speech interface (see claim 6). As to claim 12, the surgical device includes a laser (column 3, lines 38-45 and claim 8).

As for claim 19, the method for operating the first (vitrectomy cutter **32**) and the second (fragmentation handpiece **34**) surgical apparatuses from the input device (input switches **72**) includes the steps of:

a) providing speech interface (control circuitry within main console **38**, computer **18**, microphone **26**, speech recognition software, etc.) that has a first input channel coupled to the input device (unidentified bus connected to input switches **72**), a first output channel coupled to the first surgical apparatus (electrical line **46** connected to

Art Unit: 3739

vitrectomy cutter **32**) and a second output channel coupled to the second surgical apparatus (electrical line **46** connected to fragmentation hand piece **34**);

b) switching the interface in response to an audible command so that the first input channel is coupled to the first output channel; and

c) switching the interface in response to an audible command so that the first input channel is coupled to the second output channel (see column 3, lines 32-35, 46-49, and 53-63; column 5, lines 13-21 and 27-38; and column 6, lines 12-18; and claims 29-46 of parent patent No. 5,970,457).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2 is again rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al. in view of Wolf et al. "Student Reference Manual for Electronic Instrumentation Laboratories."

Brant et al., described above, do not teach the use of a multiplexer as an interface. Wolf discloses in Figs. 10-17 that multiplexer circuits typically have several input channels and a single output channel, with a decoder or selector circuit to control which input is coupled to the output. Conversely, it is well known in the art that demultiplexers are used to take a single input to a plurality of output channels under the

Art Unit: 3739

control of decoder or selector circuit. Thus, it would have been obvious to one skilled in the art at the time of the applicants invention to modify Brant et al. with Wolf and use a multiplexer as an alternative interface, or circuit, that permits control of a multi-functional devices.

4. Claims 6, 11 and 13-15 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al. in view of Green. U.S. Patent No. 6,788,999.

The surgical apparatus of Brant et al., described above, meets the limitations of the claims, except for using a robotic arm.

Green teaches a surgical system comprising at least one surgical instrument and at least one robotic arm. As to claim 13, the surgical systems of Green comprise surgical table 28, see Fig. 1. Therefore, it would have been obvious to one skilled in the art at the time of the applicant's invention to modify Brant et al. in view of Green in order to permit control of an additional surgical device in the form of a robotic arm. The use of robotic arm would enhance the precision of the surgical procedure.

### ***Response to Arguments***

Applicant's arguments filed February 22, 2005, have been fully considered but they are not persuasive. The applicant makes the following remarks/arguments:

A) Applicant argues "Brandt does not suggest or disclose a device that includes a speech interface configured to receive a voice command and provides a command signal" to the desired surgical device.

In response to this argument, Brandt clearly teaches his system "processes verbal commands to effect a desired change in a piece of equipment (e.g., a micro surgical system) via digital or analog circuit means." See col. 3, lines 32-35.

Furthermore, in page 2, paragraph 2 of the Remarks section, Applicant states that "without the voice command and control system, device selection and control [of Brandt] are both performed mechanically." Applicant further recognizes that Brandt uses the voice command system to bypass mechanical manipulation of the surgical devices.

Hence, as clearly described in Brandt and as admitted by the applicant, the examiner's position is that Brandt anticipates the use of a speech interface, which is configured to receive a command and in turn provides a responsive command signal to alter the function of the desired surgical device as presently claimed.

B) The applicant argues that the "electrical line 46 is connected only to fragmentation handpiece 34", not to the vitrectomy cutter 32.

In response to this argument, the examiner agrees with the applicant. This was a typographical error and correction has been made to the appropriate section of the Office Action.

### ***Conclusion***

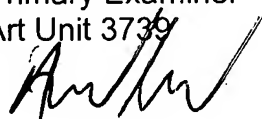
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmed M Farah whose telephone number is (571) 272-4765. The examiner can normally be reached on Mon-Thur. 9:30 AM-7:30 PM, and 9:30 AM - 6:30 PM.

Art Unit: 3739

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M DVorak can be reached on (571) 272-4768. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ahmed M Farah  
Primary Examiner  
Art Unit 3739



May 10, 2005